

Abstract of the Invention

A semiconductor imaging device, for use, for example, 5 in medical diagnosis and non-destructive testing, includes a radiation detector semiconductor substrate and a readout substrate connected to the detector by means of low temperature solder bumps. A low temperature solder is preferably a lead-tin based solder having a melting point 10 below that of eutectic lead-tin solder. Preferred embodiments of such low temperature solder include bismuth based alloys such as, for example, the eutectic (52wt-%Bi, 32wt-%Pb, 16wt-%Sn) alloy which has a melting point under 100°C.